

virus, wherein expression of said molecule in transfected cells results in production of virus when transfected into cells.

43. (Amended) A method for treating hepatitis C viral infection comprising the administration to [a] an animal in need thereof of a clinically effective amount of the composition of claim 42.

Please add the following new claims:

-- 44. The composition of claim 42, wherein the molecule encodes the amino acid sequence of SEQ ID NO:3 shown in Figures 14G-14H.

45. The composition of claim 42, wherein the molecule comprises the nucleic acid sequence of SEQ ID NO:4 shown in Figures 14A-14F.

46. The composition of claim 42, wherein the molecule encodes the amino acid sequence of SEQ ID NO:1 shown in Figures 4G-4H.

47. The composition of claim 42, wherein the molecule comprises the nucleic acid sequence of SEQ ID NO:2 shown in Figures 4A-4F.

48. A composition comprising a purified and isolated nucleic acid molecule suspended in a suitable amount of a pharmaceutically acceptable diluent or excipient, said nucleic acid molecule encodes human hepatitis C virus, wherein expression of said molecule in transfected cells results in production of virus, wherein a fragment of said molecule which encodes the structural region of hepatitis C virus has been replaced by the structural region from the genome of another hepatitis C virus strain.

49. The composition according to claim 48, wherein the molecule encodes the amino acid sequence of SEQ ID NO:5 shown in Figures 16G-16H.

50. The composition according to claim 48, wherein the molecule comprises the nucleic acid sequence of SEQ ID NO:6 shown in Figures 16A-16F.

Sub B1  
51. A composition comprising a purified and isolated nucleic acid molecule suspended in a suitable amount of a pharmaceutically acceptable diluent or excipient, said nucleic acid molecule encodes human hepatitis C virus, wherein expression of said molecule in transfected cells results in production of virus, wherein a fragment of the nucleic acid molecule which encodes at least one HCV protein has been replaced by a fragment of the genome of another hepatitis C virus strain which encodes the corresponding protein.

52. The composition of claim 51, wherein the protein is selected from the group consisting of NS3 protease, E1 protein, E2 protein and NS4 protein.

AS Cont  
53. A composition comprising a purified and isolated nucleic acid molecule suspended in a suitable amount of a pharmaceutically acceptable diluent or excipient, said nucleic acid molecule encodes human hepatitis C virus, wherein expression of said molecule in transfected cells results in production of virus, wherein a fragment of the molecule encoding all or part of an HCV protein has been deleted and, wherein the HCV protein is selected from the group consisting of P7, NS4B and NS5A proteins.

54. The composition according to claims 40 or 48, wherein the nucleic acid molecule encodes an HCV protease selected from the group consisting of NS3 domain protease, NS3-NS4 fusion polypeptide and NS2-NS3 protease.

Sub B1  
55. A method of immunizing an animal against hepatitis C virus comprising administration of a composition of claim 42, 48, 51 or 53 in an amount effective to induce immunity against hepatitis C virus.